

IV. at the last Industrial Exhibition, may be examined for the ores of tin, and the granites of the Australian Alps and Pyrenees for kaolin.

I have thus briefly indicated some of the districts of the colony, which are particularly worthy of investigation, and it is certain that if they were properly examined, new and important facts would be disclosed, valuable to the world of science, and leading to the establishment of permanent industries.

The 25,000 square miles of sandstone and clayslates, intersected nearly everywhere by metaliferous and mineral lodes, are an expression of our wealth, and ought to content us, and assure us of a permanent prosperity. But this vast area must be explored, and it would be well for the colony if this learned Society, having just concluded an enterprise far surpassing in its magnitude and in its results anything yet attempted by the Society in London, whose whole aim is to extend geographical research, it would be well, in my humble opinion, if this Society would now devote its energies to enquiries having immediate reference to the physical structure of the colony.

ART. XIX.—*On the Fresh Water Algæ of Victoria.* By
HENRY WATTS, Esq., of Warrnambool.

[Read 21st November, 1864.]

During my residence in this colony I have collected various species of fresh-water algæ and desmidiaceæ, and believing at present there is no record of these plants having been found in this colony, I am induced to present to the Royal Society, a list with localities of such specimens as have come under my observation :

DESMIDIACEÆ.

NAME.		LOCALITY.	
1.	<i>Micrasterias crenata</i> ...	...	Swamp, Ballaarat.
2.	<i>Cosmarium connatum</i> ...	...	River Yarra, Heidelberg.
3.	" <i>undulatum</i> ...	...	River Yarra, Heidelberg.
4.	<i>Staurostrum paradoxum</i> ...	...	Swamp, Ballaarat.
5.	" <i>gracile</i> ...	...	River Yarra, Melbourne, and Yan Yean water, Melbourne.
6.	<i>Docidium nodosum</i> ...	...	Swamp, Ballaarat.
7.	" <i>clavatum</i> ...	...	do. do.
8.	" <i>Ehrenbergii</i> ...	...	do. do.
9.	" <i>minutum</i> ...	...	do. do.
10.	" <i>verticillatum</i> ...	...	do. do.
11.	" <i>baculum</i> ...	...	do. do. and the River Yarra. Heidelberg.

	NAME.		LOCALITY.
12.	<i>Closterium</i>	<i>acerosum</i>	... Swamp, Ballaarat.
13.	"	<i>striolatum</i>	... do. do.
14.	"	<i>Dianæ</i>	... do. do. and the River Yarra, Heidelberg.
15.	"	<i>lineatum</i>	... Swamp, Ballaarat.
16.	"	<i>Leibleinii</i>	... do. do. River Yarra, Heidel- and Lake Wangoon, Warrnam- bool.
17.	"	<i>juncidium</i>	... Yan Yean water, Melbourne.
18.	"	<i>Griffithsii</i>	... River Yarra, Melbourne.
19.	<i>Scenedesmus</i>	<i>acutum</i>	... Swamp, Ballaarat.

Closterium juncidium seen in conjugation.

CONFERVACEÆ.

	NAME.		LOCALITY.
1.	<i>Batrachospermum</i>	<i>pulcherrimum</i>	River Yarra, Heidelberg.
2.	"	<i>vagum</i>	... do. do.
3.	<i>Draparnaldia</i>	<i>glomerata</i>	... Swamp, Ballaarat.
4.	"	<i>plumosa</i>	... River Yarra, Heidelberg.
5.	"	<i>tenuis</i>	... River Yarra, Melbourne.
6.	"	<i>nana</i>	... do. do.
7.	"	<i>elongata</i>	... River Hopkins, Allansford, near Warrnambool.
8.	<i>Chætophora</i>	<i>elegans</i>	... River Yarra, Melbourne.
9.	<i>Zygnema</i>	<i>guininum</i>	... Swamp, Ballarat.
10.	"	<i>pellucidum</i>	... River Yarra, Melbourne.
11.	"	<i>rivulare</i>	... do. do.
12.	"	<i>alternatum</i>	... River Yarra and Warrnambool
13.	<i>Tyndaridea</i>	<i>lutescens</i>	... Swamp, Ballaarat and Lake Wan- goon, Warrnambool.
14.	<i>Mesocarpus</i>	<i>species</i>	... Tower Hill Swamp.
15.	<i>Staurocarpus</i>	<i>gracilis</i>	... Lake Wangoon, Warrnambool.
16.	<i>Vesiculifera</i>	<i>fasciata</i>	... River Yarra, Melbourne.
17.	"	<i>Vaucherii</i>	... do. do.
18.	<i>Bulbochæte</i>	<i>setigera</i>	... Lake Wangoon, Warrnambool.
19.	<i>Cladophora</i>	<i>glomerata</i>	... Rivers Hopkins and Merri, Warrnam- bool and Tower Hill Swamp.
20.	<i>Lyngbya</i>	<i>Zonata</i>	... River Yarra, Melbourne.
21.	<i>Polypothrix</i>	<i>distortum</i>	... Lake Wangoon, Warrnambool.
22.	<i>Oscillatoria</i>	<i>tenuis</i>	... Warrnambool.
23.	"	<i>spadicea</i>	... do.
24.	"	<i>subfusca</i>	... do.
25.	"	<i>autumnalis</i>	... Melbourne.
26.	<i>Microscoleus</i>	<i>repens</i>	... Tower Hill Swamp.

Nos. 12, 13, 15, seen in conjugation.

Nos. 16 and 17, seen with sporangia.